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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,689	02/10/2004	George Anthony Dunn	HSJ920030091US1	9184
35987	7590	09/19/2005	EXAMINER	
JOSEPH P. CURTIN 1469 N.W. MORGAN LANE PORTLAND, OR 97229			FIGUEROA, NATALIA	
			ART UNIT	PAPER NUMBER
			2651	

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/775,689

Applicant(s)

DUNN ET AL.

Examiner

Natalia Figueroa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al (USPN 5,682,274), hereinafter Brown in view of Hrinya et al (USPN 6,204,989), hereinafter Hrinya.

RE claim 1, Brown discloses a method for improving the format efficiency of a hard disk of a hard disk drive, the hard disk drive having a rotary actuator and a read/write head (figs. 3-4 and disclosure thereof and col. 2, lines 36-45), the read/write head having a read element that is offset from a write element (fig. 5 and col. 5-line 67-col. 6, line 2), the method comprising determining a radial position of the read/write head with respect to the hard disk (figs. 4-5 and col. 5, lines 17-24 and 54-60); writing a data track having a length between successive servo sample areas that is based on an arc of the rotary actuator (figs. 5 and 8, and disclosure thereof), the radial position of the read/write head with respect to the hard disk (figs. 5 and 7 and disclosure thereof) and the offset between the read element and the write element (fig. 6 and disclosure thereof).

Brown fails to explicitly teach writing a data track having a length between successive servo sample areas that is based on an arc of the rotary actuator, the radial position of the read/write head with respect to the hard disk and the offset between the read element and the

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write element. However, Hrinya discloses such on (figs. 4 and 10, col. 4, lines 6-39 and col. 6, lines 41-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to improve the apparatus as disclosed by Brown with the above teachings from Hrinya write data at different distance given the desired head and radial offsets hence increasing the data density of a disk drive.

RE claim 2, the combination of Brown and Hrinya is relied upon for the same reasons of rejection as stated above. Hrinya further discloses determining the length of the data track from a look-up table (or data table, col. 8, lines 38-53).

RE claim 3, Hrinya further discloses determining the length of the data track based on a determination of the arc of the rotary actuator, the determined position of the read/write head with respect to the hard disk, and the physical offset between the read element and write element (col. 4, lines 6-39 and col. 6, lines 41-59).

RE claim 4, Brown further discloses determining the length of the data track based on an angular position of the rotary actuator (col. 4, lines 6-39 and col. 6, lines 41-59).

RE claims 5-8, apparatus claims 5-8 are drawn to the apparatus corresponding to the method of using same as claimed in claims 1-4. Therefore apparatus claims 5-8 correspond to method claims 1-4, and are rejected for the same reasons of obviousness as used above.

RE claim 9, Brown discloses a system for reading and writing data, comprising a rotary actuator; a read/write head having a read element and a write element (figs. 3-4 and disclosure thereof and col. 2, lines 36-45); and at least one hard disk drive configured to write data to data tracks on a hard disk (figs. 1-2, and col. 4, lines 44-45 and 52-57), wherein the lengths of the data tracks vary at varying distance from a center of the hard disk drive such that the length of unused

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areas between the data tracks and subsequent servo samples varies with a relative offset between the read element and the write element at a corresponding distance from the center of the hard disk (figs. 5 and 7, and disclosure thereof).

Brown fails to explicitly teach the lengths of the data tracks vary at varying distance from a center of the hard disk drive such that the length of unused areas between the data tracks and subsequent servo samples varies with a relative offset between the read element and the write element at a corresponding distance from the center of the hard disk. However, Hrinya discloses such on (figs. 4 and 10, col. 4, lines 6-39 and col. 6, lines 41-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to improve the apparatus as disclosed by Brown with the above teachings from Hrinya write data at different distance given the desired head and radial offsets hence increasing the data density of a disk drive.

RE claim 10, the combination of Brown and Hrinya is relied upon for the same reasons of rejection as stated above. Hrinya further discloses determining the length of the data track from a look-up table (or data table, col. 8, lines 38-53).

Response to Arguments

3. Applicant's arguments; see pages 6-8, filed 27 June 2005, with respect to the rejections of claims 1-8 have been fully considered but they are not persuasive. Applicant argues that "Neither Brown et al. nor Hrinya et al. disclose or suggest this feature of claim 1.", however the examiner respectfully disagrees because Brown et al. in combination with Hrinya et al. do disclose the writing of servo that will be based on the rotary motion of the actuator as a whole, please refer to the rejections as stated above. Furthermore, the radial position as stated in the

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claim does not specify whether it is with respect to the center or the sides of the disk, hence Brown et al. in combination with Hrinya et al. present the limitations.


Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalia Figueroa whose telephone number is (571) 272-7554. The examiner can normally be reached on Monday - Thursday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


NFM


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